

ART. XVIII.—*On the Occurrence of Two Species of  
Cryptoplax in the Tertiary Rocks of Victoria.*

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(With Plate XXX.).

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The occurrence of two species of *Cryptoplax* in our Victorian Tertiaries is worthy of notice, as hitherto no fossil representatives of the genus have been found. It is, however, in its recent distribution confined to the south-western Pacific, and the southern shores of Australia, and in its existence as a Tertiary fossil in Southern Australia we have but one more instance of the essentially Australian character of our Cainozoic fauna.

As regards the age of the two distinct deposits from which the present specimens come, opinions differ. The lower beds of Muddy Creek are by some regarded as eocene and by others as oligocene, while the upper series is generally spoken of as miocene, and was by McCoy considered older pliocene. The question is perhaps not ripe for settlement, though opposing authorities are equally positive in their views. To avoid the constant confusing references to age made in the incidental description of fossils by authors with divergent opinions, Mr. Pritchard and myself have suggested Barwonian, with two subdivisions, Balcombian and Janjukian, for the older series, and Kalimnan for the younger.

The genus *Cryptoplax* is not uncommon in the Kalimnan, but I have seen only one specimen from the Balcombian.

***Cryptoplax pritchardi*, n. sp.** (Pl. XXX., Figs. 1-6).

All the specimens of the valves that I have found, thirty in number, are much worn and are polished by attrition like so many of the fossils in the Kalimnan of Muddy Creek, and in very few cases is the articulamentum distinctly shown. The valves

approach those of *C. gunni* very closely in shape, indeed, were shape all that we had to guide us, there would be little justification in separating the fossil from it. In a few cases, however, traces of the sculpture of the tegmentum are preserved and this enables differences of specific value to be pointed out. In *C. gunni* the coarse grooving radiates from the apex, whereas in the present species faint traces of coarse concentric sculpture are visible. In this point *C. pritchardi* makes an approach to *C. larvaeformis*, as figured by Pilsbry.<sup>1</sup> Valve VIII. (see Figs. 3 and 4), allowing for its worn condition, is almost identical in shape with that of *C. gunni*, the posterior insertion plate being vertical.

Median length of specimen shown in Figs. 1 and 2, 7.5 mm., breadth, 2.5 mm. Median length of original of figs. 3 and 4, 6.6 mm., breadth 2.5 mm., depth 1.6 mm. Length of original of Figs. 5 and 6, 4.0 mm., breadth 4.0 mm.

The resemblance of *C. pritchardi* to *C. gunni* is of considerable interest since the latter species, according to the views of Pilsbry,<sup>2</sup> is the most archaic of the five recent species, from the fact that its posterior insertion plate is the least specialised, and approaches that of the normal chitons.

Locality.—“McDonald’s,” Muddy Creek. Kalimnan (? Miocene). Thirty examples.

### ***Cryptoplax gatliffi*, n. sp. (Pl. XXX., Figs. 7-9).**

Only a single valve has as yet come under my observation, and this is imperfect anteriorly. The articulamentum is shown on both sides. In shape it differs from any of the valves of *C. pritchardi*, being less pointed posteriorly. The posterior end is produced downwards into a slight hook-like process, which is shown in side view in Fig. 8. Viewed from below this process is crescentic, as it follows the curve of the valve, and its lower surface is flat. This feature, though absent from the recent species and from *C. pritchardi*, occurs in some of the other genera of Polyplacophora.

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<sup>1</sup> Proc. Malac. Soc. 4, 1901, pl. 14, f. 12, 13.

<sup>2</sup> Loc. cit., p. 152.

